AMENDMENTS

In the Specification:

Please amend the specification as indicated hereafter.

Please amend paragraph [0015] as follows:

The problem of damage to the exposed sidewalls of the mesa 24 is exacerbated by the need to transfer the wafer from the etch station to the growth chamber after the etch process has been performed. ~~The~~ Transferring the mesa 24 from the etch station to the growth chamber exposes the sidewalls of the mesa 24 to ambient air, which typically contains water vapor and oxygen. The water vapor and oxygen can cause additional oxide formation on the sidewalls of the mesa 24.

Please amend paragraph [0079] as follows:

The reduced growth temperature used to grow sublayer 162 of p-type cladding layer is still above the temperature at which the adatoms of the semiconductor material have sufficient mobility that their surface diffusion length is greater than the width w (FIG. 3H) of the [111] surfaces constituting sidewalls 144. Thus, sublayer 162 grows predominantly on the top surface of optical waveguide core mesa 140 as just described. The growth temperature of about 620° C. can be used because the material being grown lacks aluminum. When growing materials without aluminum, there ~~There is therefore~~ is no need to use a growth temperature of about 640° C., which is needed when growing aluminum-containing materials to prevent aluminum from sticking to growth mask 130. The growth temperature of 620° C. is intermediate between the growth temperature used to grow optical waveguide core mesa 140 and the growth temperature used below to grow the remainder of p-type cladding layer 160. Growth of sublayer 162 continues until it reaches a thickness of a few tens of nanometers. In an embodiment, growth continued until sublayer 162 reached a thickness of about 40 nm.

Please amend paragraph [0083] as follows:

The invention is described above with reference to examples in which optical waveguide core mesa 140 is structured to provide the active region of an optoelectronic device. However, embodiments of the invention ~~is~~ <u>are</u> not limited to optoelectronic devices and their fabrication. The invention additionally encompasses transparent waveguide devices and their fabrication. Such embodiments of the invention provide transparent optical waveguides in which optical waveguide core mesa 140 has a trapezoidal cross-sectional shape but lacks the layer structure shown in FIG. 4B. Instead, the optical waveguide core mesa is structured as a homogeneous mesa of a semiconductor material having a refractive index higher than that of cladding layers 120 and 160. Examples of suitable semiconductor materials include AlInAs, AlGaInAs and InGaAsP.